

ILLINOIS FIELD AND HERBARIUM STUDIES

ROBERT H. MOHLENBROCK AND DAN K. EVANS

Further field and herbarium studies of Illinois plants have added several new taxa to the state flora. Several are adventive species from the Chicago area, while others represent native species of taxonomically difficult groups and are treated in some detail. Appreciation is accorded to Mr. Floyd Swink and his colleagues at the Morton Arboretum who kindly made available some of their recent collections. All records cited are in the herbarium of Southern Illinois University (SIU), the Morton Arboretum (MOR), or the Missouri Botanical Garden (MO).

Poa bulbosa L. The bulbous blue grass, native to Eurasia, is previously unreported from Illinois. Collections have been made of this from cultivated beds at the Morton Arboretum. DU PAGE CO.: Morton Arboretum, within the shrub collection in Lacy Land, May 20, 1971, *F. Swink* (MOR).

Phleum pratense L. f. **viviparum** (S. F. Gray) Louis-Marie. Vivipary, whereby plantlets or vegetative buds replace the flowers in part or all of the inflorescence, may be encountered in several genera. The phenomenon seems most frequent in the Gramineae, especially such cool season grasses as *Poa* and *Festuca*. Vivipary in *Scirpus atrovirens* (Cyperaceae) is also commonly encountered. Because of the apparent rare occurrence of this type of apomictic reproduction in *Phleum pratense*, this report seems worthwhile. DU PAGE CO.: In the Morton Arboretum, July 27, 1971, *F. Swink* (MOR).

Fuirena scirpoidea Michx. The previously known range of this species was along the coastal plain of Georgia, Florida, Alabama, and Louisiana. Its discovery in Illinois at the Dolan Lake Conservation area marks a range extension of more than 500 miles. One colony was found in shallow water growing beside *Eleocharis obtusa*. Svenson

(1957), the most recent monographer of the genus, combines *F. pumila* Torrey and *F. breviseta* Coville with *F. squarrosa* Michx. The three species now attributed to the Gray's Manual region may be identified in the following key.

- 1. Leaves reduced to sheaths without blades. *F. scirpoidea*.
- 1. Leaf blades well developed. 2.
- 2. Achene dark brown with the beak pubescent; scale awn terminal. *F. squarrosa*.
- 2. Achene yellow-brown with the beak glabrous; scale awn arising below the apex. *F. simplex*.

Although *F. squarrosa* (*F. pumila*) has been attributed to Illinois (Fernald, 1950; Jones 1950, 1963; Patterson, 1876), a thorough search by the senior author has failed to reveal any such specimens from this state. HAMILTON CO.: Shallow water, Dolan Lake shore in Dolan Conservation area, June 13, 1970, *N. Tracy* (SIU).

Salix × **myricoides** Muhl. This taxon is a reputed hybrid between *S. rigida* Muhl. and *S. sericea* Marsh., although it appears to have more of the characteristics of *S. sericea*. It differs from *S. sericea* by its canescent twigs and thinly sericeous capsules, while *S. sericea* has glabrous or glabrate twigs and densely sericeous capsules. We have recently collected it from Jackson County for its first known locality in Illinois, but it undoubtedly occurs elsewhere in the state. JACKSON CO.: Along rocky stream, Giant City State Park, August 30, 1971, *R. H. Mohlenbrock* (SIU).

Populus × **smithii** Boivin. This is the hybrid between *P. grandidentata* Michx. and *P. tremuloides* Michx., first described from Michigan by Wagner in 1970. It is intermediate in several characters between the parent species, the most obvious being the number of dentations along the leaf margins. The following key will serve to distinguish this hybrid from its parents.

- 1. Margin of leaf dentate, with 5-25 teeth (averaging 10-20); buds pubescent. 2.

2. Margin of leaf with 5-15 teeth (averaging 10); petiole 5-10 cm long (averaging 7 cm).
 *P. grandidentata*.
2. Margin of leaf with 12-25 teeth (averaging 20); petiole 3-6 cm long (averaging 5.5 cm).
 *P. × smithii*.
1. Margin of leaf finely crenate, with 20 or more teeth (averaging 31); buds glabrous or nearly so.
 *P. tremuloides*.

LA SALLE CO.: Starved Rock State Park, June 16, 1943, G. N. Jones 15791 (MO). PEORIA CO.: Horse Shoe Bottom, July 27, 1919, V. H. Chase 3217 (MO).

Carya pallida (Ashe) Engl. & Graebn. Correspondence with Dr. Wayne Manning, noted authority on the genus *Carya*, suggested the possibility of *C. pallida* in Illinois, since it occurs in western Kentucky and southern Indiana. Consequently, the senior author has kept a close vigil for this species in southern Illinois and was rewarded with the discovery of a specimen from Union County referable to *C. pallida*. The distinction between *C. pallida* and *C. texana* Buckl. is difficult. Both have yellow-lepidote buds, and the fruits are not different, although the fruits in *C. pallida* are usually smaller. *Carya pallida* usually has at least a few leaves with tomentose rachises, while *C. texana* usually does not except in var. *villosa* (Sarg.) Little. In the spring, *C. texana* has distinctive red hairs, while *C. pallida* does not. UNION CO.: Dry, acidic woods, along Grapevine Trail, May 21, 1972, R. H. Mohlenbrock (SIU).

Quercus veitina Lam. f. **missouriensis** (Sarg.) Trel. This form of Black Oak has the lower surface of the leaves densely and permanently pubescent. In this respect, f. *missouriensis* resembles *Q. falcata* Michx., but differs from this species in leaf shape and bud and acorn characteristics. SALINE CO.: Edge of dry woods, Old Stone Face, July 3, 1971, R. H. Mohlenbrock (SIU).

Chenopodium. While preparing the treatment of *Cheno-*

podium for The Illustrated Flora of Illinois series, the senior author has studied many collections of the genus and has re-evaluated the species previously known from the state. He has followed closely the treatment by Steyermark (1963) in Flora of Missouri in order to make more uniform the treatment of this genus in the central midwest. Three additional recognizable species from Illinois emerged from the study.

Chenopodium pallescens Standl. In general, all Illinois *Chenopodium* with white-mealy, narrow, entire leaves have been designated either *C. leptophyllum* Nutt. (Fernald, 1950; Gleason, 1952) or *C. pratericola* Rydb. (Jones, 1963). Illinois material can be separated reliably into two taxa, one to be called *C. pallescens* Standl., the other *C. desiccatum* A. Nels. var. *leptophylloides* (Murr.) Wahl. The following key serves to separate these taxa.

1. Leaves 1-nerved, linear; pericarp firmly attached to seed. *C. pallescens*.
1. Leaves 3-nerved, oblong or narrowly lanceolate; pericarp readily removed from seed.
 *C. desiccatum* var. *leptophylloides*.

Chenopodium pallescens is found in rocky ground and in waste areas, primarily in the north-central counties of the state. *Chenopodium dissectum* var. *leptophylloides* is almost always in waste ground in the northern half of Illinois.

Chenopodium bushianum Aellen. Although Jones (1963) combined this species with *C. album* L., the conspicuous honeycombed surface of the seeds of *C. bushianum* makes it a readily recognizable species. It is found occasionally throughout the state in fields, woods, and waste places.

Chenopodium strictum Roth var. **glaucophyllum** (Aellen) Wahl. This taxon is related to *C. album* L. and *C. missouriense* Aellen. It differs from *C. album* by its smaller seeds (0.8-1.2 mm broad), and from *C. missouriense* by its coarsely toothed lower leaves and its calyx lobes which do

not cover the fruit. JACKSON CO.: Waste ground, one mile north of Carbondale, September 3, 1971, *R. H. Mohlenbrock* (SIU).

***Draba verna* L. var. *boerhaavii* Van Hall.** This variety differs from typical var. *verna* by its fruits that are never twice as long as broad and by the seeds fewer than 40 per fruit. It is naturalized from Europe and adventive in a mowed field in Illinois. JACKSON CO.: Field, Southern Illinois University campus, Carbondale, April 4, 1972, *R. H. Mohlenbrock* (SIU).

***Draba reptans* (Lam.) Fern. var. *micrantha* (Nutt.) Fern.** This variety, unreported previously from Illinois, occurs occasionally in northern Illinois where it sometimes is found growing with var. *reptans*. Variety *micrantha* differs by its hispidulous fruits.

***Suaeda depressa* (Pursh) S. Wats.** This species is normally found in the naturally occurring saline soils of southern Canada, through the plains states, and south to Texas. In an apparent response to salting by the highway department, the plant grew along the highway median in the Chicago area. COOK CO.: Median strip, one mile north of Illinois 22, one mile south of Everett Pond, October 7, 1972, *R. Schulenberg* (MOR).

***Spergularia media* (L.) C. Presl.** Another adventive element new to the Illinois flora is this member of the pink family. The previous range of this species appears to be the natural saline soils of central and coastal New York as well as coastal California and Oregon. Illinois collections were made near Elgin along a tollway where salt is frequently used by the highway department. KANE CO.: 3½ miles west of the Elgin toll booth on the Northwest Tollway right-of-way bank, in sterile clay, September 3, 1972, *R. Read* (MOR).

***Pyrus pyrifolia* (Burm. f.) Nakai.** The Chinese Pear is an occasional cultivated plant in Illinois. A specimen about

thirty-five feet tall has been found growing along a rocky stream in Giant City State Park. This species differs from the more common *P. communis* L. by its rounder fruits, slightly larger flowers, and sharply toothed leaves. JACKSON CO.: Along Stonefort Creek, Giant City State Park, September 11, 1970, *R. H. Mohlenbrock* (SIU).

Crataegus marshallii Egglest. This is one of the few species of *Crataegus* in Illinois which has the veins of the leaf running to the sinuses as well as to the points of the lobes. It differs from *C. phaenopyrum* (L. f.) Medic. by its petioles much longer in relation to the length of the blade, its fewer stamens with reddish anthers, and by its usually two nutlets per fruit. Its habitat in swampy woods is also distinctive. JACKSON CO.: Swampy woods, Greentree Reservoir, 2½ miles southwest of Gorham, *R. Anderson* (SIU).

Triadenum virginicum (L.) Raf. The discovery of this species in Lake County brings to four the number of species of *Triadenum* known from Illinois. The following key separates these four species.

- 1. Leaves without punctations. *T. tubulosum*.
- 1. Leaves punctate, at least on the lower surface. 2.
 - 2. Leaves petiolate. *T. walteri*.
 - 2. Leaves sessile. 3.
 - 3. Sepals obtuse, up to 5 mm long; styles up to 1.5 mm long. *T. fraseri*.
 - 3. Sepals acute, 5-8 mm long; styles 2-3 mm long. *T. virginicum*.

LAKE CO.: Boggy ground, Illinois Beach State Park, August 3, 1972, *R. H. Mohlenbrock* (SIU).

Mentzelia decapetala (Pursh) Urban & Gilg. This species is native to dry prairies and plains west of the Mississippi River. In Grundy county, apparently its easternmost site, it was collected along a railway where it occurred with other such adventives as *Kochia scoparia*, *Setaria viridis*, *Helianthus annuus*, and *Grindelia lanceolata* f. *latifolia*.

GRUNDY CO.: Cinder and gravel ballast, at Eileen, along right-of-way of Santa Fe RR, August 13, 1972, *R. Schulenberg, D. Kropp, & D. Ladd* (MOR).

***Polypremum procumbens* L.** This species was expected to occur in southern Illinois since it is known from Kentucky to the south and five counties in nearby southeastern Missouri. Collections were made from a sandy field in the Horseshoe Lake Conservation area. The inconspicuous corolla, procumbent habit, and slender leaves probably have resulted in this species being overlooked in other localities. ALEXANDER CO.: Low, sandy field, Horseshoe Lake, August 11, 1971, *J. Huston* 920 (SIU).

***Jacquemontia tamnifolia* (L.) Griseb.** This species is native to the southeastern United States and represents a genus new to the Illinois flora. This probable adventive was collected from a disturbed habitat where it grew in association with *Agropyron repens*, *Ipomoea purpurea*, and *Euphorbia dentata*. The following key serves to distinguish *Jacquemontia* from *Ipomoea*, *Convolvulus*, and *Calystegia* in Illinois.

1. Stigma 1, capitate or with 2 to 3 lobes. *Ipomoea*.
1. Stigmas 2, noncapitate, without lobes. 2.
 2. Stigmas elliptic, oblong or flattened. *Jacquemontia*.
 2. Stigmas filiform or subulate. 3.
 3. Calyx not concealed by large bracts; fruit 2-locular. *Convolvulus*.
 3. Calyx concealed by 2 large bracts; fruit 1-ocular. *Calystegia*.

GRUNDY CO.: Railroad tracks at Gardner, October 15, 1972, *R. Schulenberg & E. Lace* (MOR).

***Vinca major* L.** The large-flowered periwinkle, an introduced European cultivar, was previously known in the wild in the coastal states from North Carolina south to Mississippi. In Illinois the species was collected around an old homestead in Pope County where it grew without cultivation. POPE CO.: Randolph Farm, *V. Randolph* (SIU).

Matelea decipiens (Alex.) Woodson. This climbing member of the milkweed family is widely distributed in central and southern Missouri, but the record cited below is apparently the first from Illinois. All three Illinois representatives of this genus are restricted to the southernmost counties. They may be distinguished by the following key.

- 1. Flowers greenish-yellow; pedicels glabrous; follicles smooth, angular. *M. gonocarpa*.
- 1. Flowers rose, maroon, or rarely cream; pedicels pubescent; follicles rounded, muricate. 2.
- 2. Petals 3-6 mm wide, maroon. *M. decipiens*.
- 2. Petals 1.5-2.5 mm wide, rose or rarely cream.
 *M. obliqua*.

WILLIAMSON CO.: Low floodplain woods, natural levee of Big Muddy River, north of Colp, May 28, 1972, *M. Swayne & J. Swayne* (SIU).

Physalis macrophysa Rydb. This plant, treated variously as a species, variety, or form, differs from *P. subglabrata* Mack. & Bush by its translucent leaves and its large, pyramidal calyces when in fruit. The calyx becomes 3-6 cm long during fruiting. Illinois specimens, previously labelled *P. subglabrata*, have been seen from Champaign and Peoria counties.

Antirrhinum orontium L. The often cultivated lesser snapdragon has been collected from a cultivated oat field. Although it has probably escaped elsewhere in Illinois, this is the first report of such an occurrence. DU PAGE CO.: Oat field, National Accelerator Laboratory near Warrenville, September 28, 1972, *F. Swink* (MOR).

Penstemon cobaea Nutt. This sometimes cultivated beards-tongue was previously known from southern Missouri northwest to Nebraska, south to Texas, and east to Arkansas. Within this range the typical habitats are prairies, glades, and bluffs. In Illinois this species was collected from a dry meadow where it grew in association with such

prairie elements as *Asclepias verticillata*, *Poa compressa*, and *Physalis subglabrata*. Although this species is not known to be native to northeastern Illinois, the plant associates as well as the prairie habitat might suggest an indigenous condition. KANE CO.: Flat, dry meadow, west of Montgomery, near Kendall County line, June 25, 1972, *J. Phillips, D. Young, & R. Schulenberg* (MOR).

Lagenaria siceraria Standl. This highly variable gourd is frequently planted in Illinois and occasionally escapes from cultivation. An early collection from Hancock County and a recent one from Jackson County verify its existence in Illinois.

Cucurbita pepo L. var. **ovifera** (L.) Alef. This variety of the common Field Pumpkin has extremely variable fruits, many of them the source of interesting ornamental gourds such as the Pear, the Bell, the Apple, the Egg, and the Orange. A single collection has been made for this plant in Illinois. UNION CO.: in disturbed soil along a stream, 2 miles north of McClure, July 31, 1971, *R. H. Mohlenbrock* (SIU).

Sherardia arvensis L. This new element of the Illinois flora is adventive but well established in areas of the SIU campus at Carbondale. It may be confused with *Galium* but is distinguished by its long, funnel-form, blue corolla and narrow leaf-like involucres that subtend the flowers. In addition to our location, the species is local in Nova Scotia, southeastern Canada, Missouri, Tennessee, and North Carolina. JACKSON CO.: Lawn, SIU campus by the Forest Service Laboratory, April 30, 1971, *D. Evans* 11408 (SIU).

Campanula rotundifolia L. var. **velutina** A. DC. The occurrence of typical *C. rotundifolia* from the rocky environs of northeastern Illinois is not uncommon. However, variety *velutina* is heretofore reported only from a single collection by E. J. Hill from Cheboygan County in northern Michigan. We have this taxon from near Apple River Canyon State Park. Here the plant grows in the crevices of an east-facing limestone wall which borders Apple River. Associated spe-

cies include the typical form, *Aquilegia canadensis*, *Carex granularis*, and the cliff fern *Cryptogramma stelleri*. Considering the close habitat association with the markedly different typical form, it seems unlikely that this pubescent variety is a mere ecological variant as claimed by some. JO DAVIESS CO.: East-facing limestone wall bordering Apple River, 1/4 mile northeast of Apple River Canyon State Park, June 13, 1972, *D. Evans* 1156 (SIU).

Grindelia lanceolata Nutt. f. *latifolia* Steyerem. Prior to this report from Grundy County, f. *latifolia* was unknown in Illinois. The typical form remains unreported from the state. The closest occurrence of this new taxon to the Illinois site is the type locality in Stone County, Missouri. Collections are also known from Oklahoma. GRUNDY CO.: At Eileen, in N 1/2 of Sect. 36, T33N, R6E, August 13, 1972, *R. Schulenberg & D. Ladd* (MOR).

Senecio jacobaea L. Collections from railways and roadsides often produce rare or unusual adventive species. This waif recently has been collected from a railway in the Chicago area. DU PAGE CO.: Great Western RR at Euclid Avenue, Villa Park, August 17, 1972, *F. Swink* (MOR).

Thelesperma gracile (Torr.) Gray. The natural habitat and range of this unusual composite are the prairies and plains from Nebraska to Wyoming, south to Arizona, and east to Texas and Oklahoma; also Mexico and South America. In addition, Steyermark (1963) reports two adventive sites in Missouri. This roadside collection from Kane county represents the easternmost extension of its range in North America. KANE CO.: Along Ancutt Road, west of Montgomery, July 4, 1972, *F. Swink* (MOR).

LITERATURE CITED

- FERNALD, M. L. 1950. Gray's Manual of Botany, ed. 8. The American Book Company, New York. 1632 pp.
- GLEASON, H. A. 1952. The New Britton and Brown Illustrated Flora of Northeastern United States and Adjacent Canada. New York Botanical Garden, New York. 3 Vol. 1762 pp.

- JONES, G. N. 1950. Flora of Illinois, ed. 2. Am. Midl. Nat. Monogr. 5: 1-368. University of Notre Dame Press, Notre Dame, Indiana.
- . 1963. Flora of Illinois, ed. 3. Am. Midl. Nat. Monogr. 7: 1-401. University of Notre Dame Press, Notre Dame, Indiana.
- PATTERSON, H. N. 1867. Catalogue of phaenogamous and vascular cryptogamous plants of Illinois. Oquawka, Illinois. 54 pp.
- STEYERMARK, J. A. 1963. Flora of Missouri. The Iowa State University Press, Ames, Iowa. 1725 pp.
- SVENSON, H. K. 1957. *Fuirena*. In: North American Flora 18(9): 505-507.

SOUTHERN ILLINOIS UNIVERSITY
CARBONDALE, ILLINOIS 62901

TWO NEW COLOR-FORMS FROM SOUTHERN MAINE

While collecting in the Ocean Park section of Old Orchard Beach, York County, Maine, in recent summers, I have noticed certain plants of *Spiraea latifolia*, Meadowsweet, with deep-pink flowers. Some of these plants have pubescent panicles; others are glabrous. I have found this form growing both in open wet spots and in shaded woodland stations.

Spiraea latifolia (Ait.) Borkh. forma *rosea* T. W. Wells, forma nova. TYPE: **Maine**: YORK CO.: Old Orchard Beach, 11 October, 1969, T. W. WELLS (NEBC). Differt a forma *latifolia* floribus valde roseis.

While collecting in salt-marshes along Goose Fare Creek, which is the southern boundary of Ocean Park, I found plants of *Polygonum ramosissimum* which differ from the typical in that the sepals have bright-white margins.

Polygonum ramosissimum Michx. forma *alba* T. W. Wells, forma nova. TYPE: **Maine**: YORK CO.: Old Orchard Beach, 5 September, 1970 T. W. WELLS (NEBC). Differt a forma *ramosissimum* sepalis albomarginatis.

THEODORE W. WELLS
MILTON ACADEMY
MILTON, MASSACHUSETTS 02186